LEADERS IN FLUID TRANSFER SOLUTIONS

INSTRUCTION MANUAL

12V ELECTRIC DIESEL PUMP - 80LPM

S-FPD80-12V



Thank you for purchasing this quality 80 LPM 12 Volt Diesel Transfer Pump. The pump is a self priming rotary vane pump with IP55 protection and built in poppet valve.

SAFETY INSTRUCTIONS

WARNING

When using electrically powered equipment, always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury, equipment damage, and environmental contamination.

Important Safety Precautions

To ensure operator safety and protect the pump from potential damage, users should read and understand this instruction manual before operating or servicing this product.

1. GENERAL INSTRUCTIONS

- **Use this pump with diesel fuel only.**
- Never smoke or use the pump near sparks, open flames, or other ignition sources, especially during refuelling.
- Turn off all nearby electrical equipment before operating or servicing the pump.
- Read and understand all safety instructions before operating the pump.
- Ensure all users are familiar with the pump's operation and safety procedures before use.
- Failure to follow these instructions may result in serious injury, fire, explosion, equipment damage, or death.
- **Do not** operate the pump in areas where explosive atmospheres, flammable vapours, or corrosive substances are present.
- **Do not** expose the pump to rain or use it in wet, damp, or flooded areas, or where it may be exposed to water splashes.
- **Do not** allow children, bystanders, or pets near the work area during operation.
- When not in use, store the pump in a clean, dry, secure location out of the reach of children.
- **Do not** modify this pump in any way otherwise warranty will be void.
- **Do not** use this pump for any other for applications for which it was not designed.
- **Do not** remove the inline fuse from this pump.

- Always use the appropriate PPE equipment when using this pump, such as safety glasses, protective gloves, suitable work clothing, and non-slip footwear.
- Before using the pump, carefully inspect all parts to ensure they are in good condition, operate correctly, and perform their intended function. Any damaged, worn, or malfunctioning parts must be repaired or replaced before use.
- **Do not** use the pump if the power cord is damaged. Never pull or jerk the cord to unplug it from the power outlet. Keep the cord away from heat, oil, sharp edges, and moving or rotating parts. Inspect the power cord and extension cords regularly and replace them immediately if any damage is found.

⚠ CAUTION

Before each use, inspect the power cable and electrical terminals for signs of damage. If the power cable is damaged, have it replaced immediately by a qualified electrician.

- **Do not** handle the power cable or electrical plug with wet hands.
- **Do not** modify this pump in any way. Use only original spare parts or accessories recommended in this instruction manual.
- Repairs must be carried out only by qualified service personnel.
- Disconnect the pump from the power source when it is not in use, before performing maintenance, or before installing or replacing accessories.
- Ensure the power switch is in the OFF position before connecting the pump to the power supply.
- When operating the pump outdoors, use only extension cables approved for outdoor use and of a suitable current rating and length. Using unsuitable extension cables may create a safety hazard.
- Always remain attentive while operating the pump. Do not use the pump if you are tired or under the influence of alcohol, drugs, or medication that may impair your ability to operate the equipment safely.

⚠ CAUTION

Do not operate the dispensing system if the power cable, inlet hose, outlet hose, dispensing nozzle, or any safety device is damaged. Replace damaged components before use.

1.2. GENERAL INSTRUCTIONS

This pump has a 30 minute duty cycle. After 30 consecutive minutes of operation, allow the pump to cool by stopping it for 30 minutes otherwise motor damage can occur.

Do Not Run the Pump Dry: Never operate the pump without fluid for more than 30 seconds, as dry running may damage the pump.

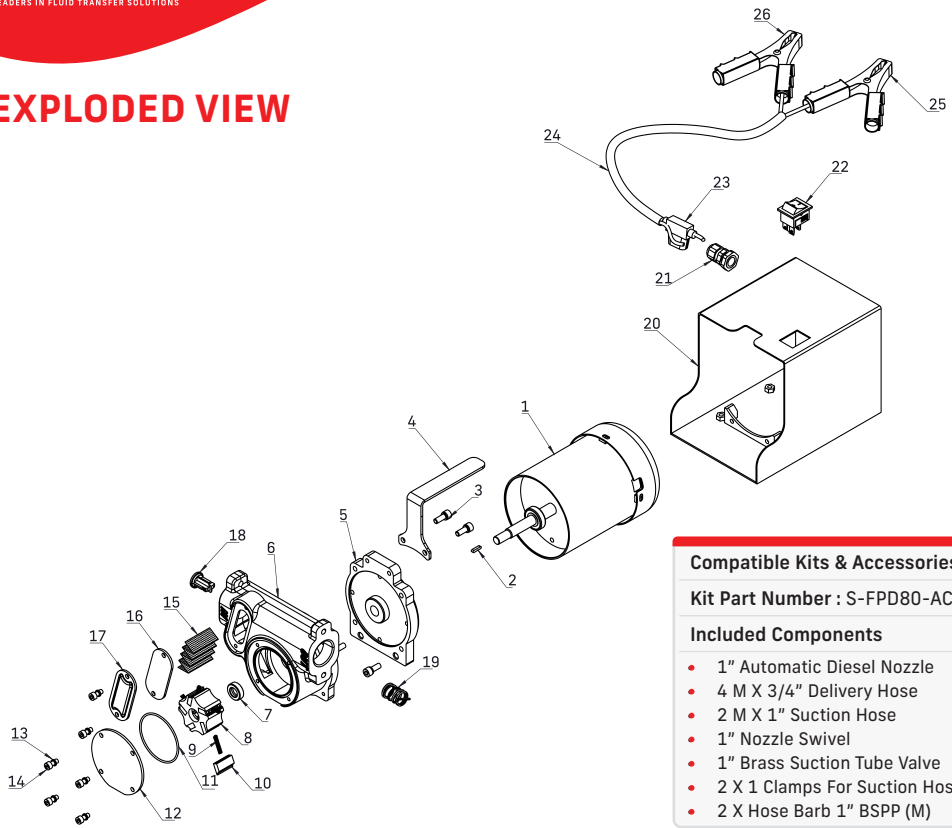
WHAT'S IN THE BOX

- 12 V Electric Diesel Pump 1
- 1" BSPP (M) Fittings 2
  ....
- Instruction Manual 1

TECHNICAL SPECIFICATIONS

Model	S-FPD80-12V
Flow Rate Range	80 LPM / min
Maximum Pressure	43.5 PSI / 3 Bar
Operating Temperature	-10°C ~ 40°C
Voltage	12 Volt DC
Duty Cycle (Min)	S2 30
RPM	3100
Inlet / Outlet Thread	1" BSPP (F)
Suction Height	3m
Power Cable	2m
IP Protection	IP54
On / Off Switch	Yes
Pump body	Cast Iron
Fuse	40 Amp
Rotor	FC0208
Vanes	PPM
Shaft	40Cr Alloy Steel
Seal	NBR
Net Weight	9 Kg

EXPLODED VIEW



Compatible Kits & Accessories

Kit Part Number : S-FPD80-ACC

Included Components

- 1" Automatic Diesel Nozzle
- 4 M X 3/4" Delivery Hose
- 2 M X 1" Suction Hose
- 1" Nozzle Swivel
- 1" Brass Suction Tube Valve
- 2 X 1 Clamps For Suction Hose
- 2 X Hose Barb 1" BSPP (M)

No.	Description	Qty.
1	Motor	1
2	Parallel Key M3 × 3 × 14	1
3	Hex Socket Head Screw M6 × 16	4
4	Handle	1
5	Mounting Flange	1
6	Pump Head	1
7	Oil Seal (12 × 21 × 7)	1
8	Rotor	1
9	Compression Spring	5
10	Vane	5
11	O-Ring (OD Ø64 × 2)	1
12	Cover Plate	1
13	Spring Washer M5	6

No.	Description	Qty.
14	Hex Socket Head Screw M5 × 12	6
15	Filter Screen	1
16	Sealing Rubber Gasket	1
17	Gasket Retainer Plate	1
18	Bypass Valve	1
19	Bypass Valve Spring	1
20	Mounting Housing Assembly	1
21	Waterproof Cable Gland	1
22	Waterproof Rocker Switch	1
23	Fuse	1
24	Cable	1
25-26	Alligator Clip	1

Note: No available spare parts.

INSTALLATION

1. INSTALLING AND CONNECTING THE PUMP

1.1. Check that the pump is complete and not damaged before switching it on.

1.2. The pump may be installed either vertically or horizontally and can be fixed using the metal mounting plate.

1.3. Before connecting hoses, ensure that both the hose and reservoir are clean and free from dust or residue that may damage the pump or accessories.

2. HOSE REQUIREMENTS AND PREPARATION

2.1. The minimum recommended suction hose diameter is 1".

2.2. Use only hose suitable for operation under negative pressure.

2.3. The minimum recommended delivery hose diameter is 1", with a maximum pressure rating of 10 BAR.

2.4. Before connecting the discharge pipe, partially fill the pump body with diesel to assist priming.

WARNING

Using incorrect hose specifications may result in pump failure or leakage.

3. PRIMING THE PUMP

3.1. During priming, ensure the suction hose is empty, and the pump body is partially filled with diesel.

3.2. The pump can lift diesel up to a maximum height difference of 2.5~3 meters during priming.

3.3. Priming may take from a few seconds up to 1 minute.

3.4. If a dispensing gun is installed, it may restrict air evacuation due to its automatic shut-off mechanism.

3.5. If air evacuation is difficult during priming, temporarily remove the dispensing gun.

CAUTION

Failure to allow proper air evacuation may prevent correct priming of the pump.

WARNING

Failure to install an anti-siphon valve may result in uncontrolled diesel leakage.

4. GENERAL OPERATION

4.1. Before starting the pump, ensure the discharge valve is closed (gun or line valve).

4.2. Connect the pump to an appropriate power supply, ensuring correct polarity:

- Red = Positive (+)
- Black = Negative (–)

4.3. Switch ON the power supply.

4.4. The bypass valve allows operation with a closed delivery line only for a short duration (2–3 minutes maximum).

4.5. Open the discharge valve by firmly holding the end of the delivery line (gun or equivalent).

4.6. During operation, avoid inhaling vapours or pumped product.

4.7. Once dispensing is complete, switch OFF the pump and ensure the power supply is fully disconnected.

CAUTION

Do not operate the pump with a closed discharge line beyond the specified bypass time limit, as this may cause overheating or damage.

OPERATION

1. PRE-OPERATION CHECKS

1.1. Always ensure the diesel flow direction is correct by following the “IN” and “OUT” markings on the pump.

1.2. Before connecting the pump, verify that the power supply complies with the manufacturer’s specifications (recommended: 12V DC).

1.3. Ensure the pump is in good working condition and that there are no visible leaks.

1.4. Before use, check that the hose and reservoir are clean and free from dust, debris, or residue that could damage the pump or accessories.

1.5. Do not draw fluid from the bottom of the tank if impurities are present.

CAUTION

Using a contaminated tank or hose may damage the pump and reduce performance.

2. POWER CONNECTION

2.1. The pump may be powered using a suitable 12V DC car battery for diesel transfer applications.

2.2. Ensure correct voltage is always used when connecting the pump.

WARNING

Incorrect voltage supply may damage the pump or create safety hazards.

3. FLUID COMPATIBILITY

3.1. The pump is designed only for diesel fuel.

3.2. **Do not** use the pump with gasoline, liquefied petroleum gas (LPG), alcohol, or any other non-approved liquids.

WARNING

Use of unauthorized fluids may cause fire, explosion risk, and will void the warranty.

4. FILTRATION AND CLEANLINESS

4.1. Use appropriate filters or strainers to prevent impurities from entering the fuel system.

CAUTION

Failure to use filtration may result in pump damage due to contamination.

5. PROTECTIVE EQUIPMENT

5.1. Always wear suitable protective equipment when operating the pump, including:

- Protective Gloves
- Safety Shoes
- Close-fitting Protective Clothing
- Safety Glasses

CAUTION

Prolonged contact with diesel may cause skin irritation. Always use protective gloves.

6. OPERATING RESTRICTIONS

6.1. Do not use the pump to supply aviation fuel to aircraft.

6.2. Do not operate the pump dry under any circumstances.

WARNING

Dry running may cause severe damage to the pump.

MAINTENANCE

Proper and regular maintenance of the pump ensures safe operation, optimal performance, and extended service life.

1. ROUTINE INSPECTION

1.1. Inspect the pump body, hoses, fittings, and electrical cables for wear, cracks, or damage before each use.

1.2. Check all connections for tightness and signs of leakage.

1.3. Ensure the inlet and outlet ports are clean and free from blockages.

1.4. Verify that the power cable, fuse and terminals are not damaged or corroded.

CAUTION

Damaged components must be replaced immediately. Do not operate the pump with faulty parts.

2. CLEANING

2.1. Clean the exterior of the pump using a dry or slightly damp cloth.

2.2. Remove dust, dirt, or fuel residue from the pump body and accessories.

2.3. Clean filters or strainers regularly to prevent clogging and maintain flow efficiency.

2.4. Ensure no water or liquid enters the electrical components.

WARNING

Do not use solvents, petrol, or aggressive chemicals for cleaning.

3. FILTER AND HOSE MAINTENANCE

3.1. Inspect suction and discharge hoses regularly for cracks, collapse, or blockage.

3.2. Replace any damaged hoses immediately.

3.3. Clean or replace filters/strainers as required based on usage conditions.

3.4. Ensure hoses are correctly rated for diesel and suction pressure.

4. ELECTRICAL SYSTEM MAINTENANCE

4.1. Periodically check battery clamps, fuse, connectors, and terminals for corrosion or looseness.

4.2. Always ensure the correct voltage supply (12V DC) is maintained.

4.3. Replace damaged cables only with approved equivalents.

WARNING

Incorrect electrical connections may result in pump failure or safety hazards.

5. STORAGE

5.1. Drain all diesel from the pump before long-term storage. Store the pump in a clean, dry, and well-ventilated area.

5.2. Coil hoses properly to avoid kinking or damage.

TROUBLESHOOTING

Problem	Cause	Solution
The engine does not start	No or insufficient electrical power	Check electrical connections and safety systems.
	Rotor/mechanism is blocked	Inspect rotating components for damage, obstructions, or jamming.
	Engine malfunction	Contact a qualified repair technician or maintenance department.
	Blown fuse	Replace 40 Amp fuse
The engine runs slowly at start-up	Power supply too weak	Ensure the correct power supply is used and adjust if necessary.
Low or no flow	Low tank level	Fill the tank.
	Valve is blocked	Clean and/or replace the valve.
	Filter is clogged	Clean the filter.
	Excessive suction pressure	Reduce pumping load while maintaining minimum tank level or increase suction pipe diameter.
	High pressure losses due to bypass operation	Use shorter hoses or hoses with a larger diameter.

Problem	Cause	Solution
	Bypass is blocked	Disassemble, clean, and/or replace the bypass valve.
	Air entering pump or suction hose	Check all connections and seals for leakage.
	Suction hose is crushed or damaged	Inspect hose condition and replace with a hose suitable for suction pressure.
	Power supply incorrect or insufficient	Check and adjust the power supply, correct the voltage, and/or use cables with a larger cross-section.
	Suction hose positioned at the bottom of the tank	Adjust the hose length and position.
Pump operates abnormally noisy	Cavitation (formation and collapse of vapor/gas bubbles)	Reduce suction pressure.
	Irregular bypass operation	Dispense fuel until all air is purged from the system.
	Air present in the fluid	Check suction connections for air leaks.
Leaks at pump body	Suction circuit is blocked	Unblock the suction circuit.
Pump does not prime	Valve on suction circuit malfunctioning	Replace the valve.
	Suction chambers are dry	Prime the pump by injecting liquid into the outlet.
	Pump chambers are dirty or clogged	Clean and unclog the pump chambers.

NOTE: This product should be disposed of according to all applicable local and national government environment regulations and guidelines!

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All STM products are specially selected by our experienced technical team at Macnaught®, ensuring they meet our strict quality standards.

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